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## PATENT ABSTRACTS OF JAPAN

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**(54) ROBOT FOR ASSISTING  
ADVANCE AND GOING-OVER  
OF STEP BY  
EXTENSION/CONTRACTION  
DEGREE OF THESE  
RESPECTIVE LEGS AND  
POSITIONAL CHANGE IN  
RESPECTIVE LEGS TO  
APPARATUS BY USING  
WHEELED  
EXTENSIBLE/CONTRACTIBLE  
LONGITUDINALLY SLIDABLE  
MOVING LEGS**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To enable a walking difficult person to safely and easily overcome a level difference by providing a plurality of jack type wheeled extensible/contractible longitudinally slidable moving legs on an apparatus.

**SOLUTION:** When walking on flatland, a height of two wheeled extensible/contractible longitudinally slidable moving legs (JTER) is adjusted to realize a state close to a foot posture and a height at walking time of a healthy person to enable safe walking by reducing a burden to feet. When going up the wide stairs, a JTER-A is advanced, and when a sensor detects an obstacle at

a prescribed distance, after raising the whole apparatus by extending a foot of the JTER up to becoming higher than a step, the JTER-A is contracted, and the contraction is stopped at time slightly higher than a height of the step. Wheels are rotated and advanced, the wheels are rested when approaching by a prescribed distance to the obstacle, the JTER-A is extended to be landed on an upper step, a JTER-B is contracted, and after the wheels approach by a prescribed distance to the obstacle, the JTER-B is landed, and a JTER-C is contracted to thereby enable going-over of the step being a defect of the wheels.

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